

REMARKS

An RCE accompanies this Response. Therefore, it is respectfully requested that the accompanying claim amendments be entered and considered on the merits.

Claim Rejections Under 35 USC§103

1. Claims 1-4 and 7-9 were rejected under 35 U.S.C. §103(a) as being unpatentable over EP 1 098 380 A1 to Yoshimura et al, in view of U.S. Patent No. 6,291,094 to Yoshimura et al.

Claims 2 and 3 have been cancelled. The limitations of Claim 2 have been added to Claim 1. Claim 1 has been amended to further recite that the stainless steel layer has a portion that is directly contacting the hydrophobic layer. These added features to claim 1 are not disclosed in the cited references. Yoshimura et al. (EP 1 098 380) and Yoshimura et al. (US 6,291,094) disclose a structure of base sheets 65, 66 coated with coating layers 62, 64, and the coating layers covered with a hydrophobic layer, but does not disclose a structure as shown in FIG. 11 of the present invention as now set forth in the amended Claim 1.

Referring to FIG. 11 and the related descriptions of the present invention, the graphite layer is etched such that the stainless steel layer 1160 is exposed in the process of dry-etching for forming the flow-field channels 610. As for the process of dry-etching (e.g., sand blasting etching process), the stainless steel layer 1160 has a substantially smaller etch rate than the graphite layers formed to the front and rear of the stainless steel layer 1160. Therefore, such stainless steel layer 1160 functions as an etch stop in the process of etching. In addition, in the process of forming the hydrophobic layer, the hydrophobic layer 810 is formed while the stainless steel layer 1160 is exposed in the flow-field channels 610. Therefore, for a finished separator 1150, the stainless steel layer 1160 becomes exteriorly exposed interposing the hydrophobic layer 810, since the hydrophobic layer 810 is formed while the stainless steel layer 1160 is exposed in the flow-field channels 610. In other words, the stainless steel layer has a portion that is directly contacting the

hydrophobic layer as amended Claim 1 recites. Therefore, this rejection under §103(a) should be withdrawn.

2. Claims 5 and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over EP 1 098 380 A1 to Yoshimura et al, in view of U.S. Patent No. 6,291,094 to Yoshimura et al, and further in view of U.S. Patent No. 5,527,363 to Wilkinson et al.

Even if it were obvious to combine Wilkinson et al. to the other references, Wilkinson fails to cure the deficiencies in the other references. Therefore, this rejection under §103(a) should be withdrawn.

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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